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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,986	03/31/2004	Brian J. Buck	04-282	8181

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MBHB/TRADING TECHNOLOGIES
300 SOUTH WACKER DRIVE
SUITE 3200
CHICAGO, IL 60606

EXAMINER

CHOW, JEFFREY J

ART UNIT	PAPER NUMBER
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2628

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/814,986	Applicant(s) BUCK, BRIAN J.	
	Examiner Jeffrey J. Chow	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

The finality of the office action filed 11 August 2006 is withdrawn as new grounds of rejections were made.

Applicant's arguments, see Remarks, filed 29 September 2006, with respect to the rejection(s) of claims 1 – 3, 5 – 17, 19 – 23, 25, 26, and 28 – 35 under Gould (US 6,219,052) in view of Duquette (US 2005/0228735) and Holzman et al. (US 6,064,401) have been fully considered but are not persuasive.

Applicant argues that the combination of Gould, Duquette, and Holzman do not teach the limitation, “wherein upon receiving a new data in the data series, displaying the new data in the first axis region having a first linear scale and shifting data previously displayed in the first axis region to the second axis region for display along a second linear scale” (pages 8 and 9).

Applicant also argues that the modification would change the principle of operation of Holzman and the motivation is not correct and would not lead to the presently claimed invention (page 9).

Applicant further argues that moving a sliding lens over plotted points by a user does not cause data to shift along an axis and that lens is shifting (page 10). The claimed limitation is broad enough where the combined references to read on the claims. The language of the claimed limitation only requires displaying the new data in the first axis region having a first linear scale when new data in the data series is received as for the shifting data previously displayed in the first axis region to the second axis region for displaying along a second linear scale is independent from receiving new data in the data series. Duquette discloses a trader workstation 714 that is able to save market data previously received from the exchange server 710 and loads

Art Unit: 2628

the historical data first and then begin processing of the current real-time market data coming from the exchange server 710 (paragraph 69), which reads on the claimed limitation wherein upon receiving a new data in the data series, displaying the new data in the first axis region having a first linear scale. Holzman discloses a lens that zooms in a portion of a graph and the lens being able to slide, effectively shift data from one region to another in either directions (column 6, line 33 – column 7, line 7 and Figure 7), which reads on the claimed shifting data previously displayed in the first axis region to the second axis region for display along a second linear scale. The combination of these references reads on all the claimed limitations. Holzman invention does shift the lens, but in doing so will shift the data from one region into another. In Figure 7, Holzman discloses three regions, two regions having the same linear scale and the middle regions where data is being magnified having a different linear scale. When the user shifts the magnifying lens, say for viewing 15 – 25 minutes instead of 10 – 20 minutes, relatively, data from the 10 – 15 minutes is shifted from the 10 – 15 minutes of the middle region to the adjacent region and data from the 20 – 25 minutes is shifted from the 20 – 25 minutes of the furthest right region to the middle region. The user also has the ability to change the size of the magnifying lens in where changing the range from 10 – 20 minutes to 15 – 20 minutes would also involve shifting data from one region to another region. The combination of the invention does not change the principle operation of Holzman. The principle operation of Holzman is zooming in on a portion of a graph. The combination of the references takes in Holzman invention of zooming in on a portion of a graph. The primary reference of Gould incorporates the principle operation of Holzman. Motivation to display new data in the first axis region having a first linear scale when receiving new data in the data series is to allow users to see up-

to-date information (Duquette, paragraph 69). Motivation shift data from one axis region to another axis region is to allow users to view any portion of the data the user desires. The intended use of Holzman is to allow users to zoom in on the desired data (column 1, lines 7 – 15). In other words, the motivation of shifting data from one axis region to another axis region is to zoom in on desired data.

Applicant argues that proposed modification would the principle operation of Holzman by removing control of the sliding lens from the user, as data will be shifted out from underneath the lens upon receipt of new data, thereby magnifying data that is of little or no concern to the user and un-magnifying data that is of interest to the user (page 10). First, assuming the intended combination does the above mention combination, this would further read in detail of the claimed limitation. Second, the purpose of the user to have control of the magnifying lens is to examine desired data. If the combination of the references shifts undesired data into the magnification region and the desired data out of the magnification region, the user still has control of the magnifying lens to examine desired data. The combination of the references does require the desired data of the user to be focused all the time but requires the user to be able to examine desired data. Third, the combination of the references was intended for the magnifying lens to be focused on the desired region set by the user. However, if shifting the data from one axis region to another axis region when new data is received is practical with the combined references, then the combined references teaches the claimed limitations.

Art Unit: 2628

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 3, 5 – 17, 19 – 23, 25, 26, and 28 – 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gould (US 6,219,052) in view of Duquette (US 2005/0228735) and Holzman et al. (US 6,064,401).

Regarding independent claim 1, Gould discloses a computerized system 10, comprising a console 11 containing a CPU 12, memory 13, I/O circuitry 14 connected to a monitor 15 having a display screen 16, and control devices in the form of keyboard 17 and a mouse 18 (lines 19 – 23, column 1). Gould also discloses a computerized system provides the user with means to shrink less important or less significant portions of the information displayed, with the result of magnifying the portions that the user deems significant (lines 14 – 18, column 2) where the information displayed is in the form of video, sound, graphics or text while maintaining a general view of the information (lines 63 – 67, column 1) and where the sound graph in Figure 8 shows a time axis being divided into different linear and continuous regions 51 46 and Figure 10 clearly shows a time axis being divided into different linear and continuous regions and where the regions that are expanded and shrunk creates a linear region in each region and where adjacent regions are non-linear and continuous (column 5, lines 26 – 64, and Figures 8 – 10), which reads on the claimed at least one axis divided into a plurality of axis regions comprising at least a first axis region and a second axis region, wherein each of the first axis region and the second axis

Art Unit: 2628

region uses a different linear scale, and wherein the plurality of axis regions forms a continuous non-linear scale on the at least one axis. Gould discloses data being displayed for the sound file (Figure 8), which reads on the claimed a chart displayed in relation to the plurality of axis regions, wherein the chart displays the data series, wherein the data series is plotted in each axis region based on a different linear scale corresponding to each respective axis region. Gould did not expressly disclose new data and shifting old data from one region to another because of new data. Gould did disclose that a user can play through a portion of a recorded sound file and will play at normal speed through the marked segments 51, but will fast-forward at (for example) twice the normal speed through the unmarked segments 52 and in where the marked segments 51 being expanded in time and the unmarked segments 52 being condensed (column 5, lines 43 – 50 and Figure 8). Duquette discloses a trader workstation 714 that is able to save market data previously received from the exchange server 710 and loads the historical data first and then begin processing of the current real-time market data coming from the exchange server 710 (paragraph 69). Holzman discloses a lens that zooms in a portion of a graph and the lens being able to slide, effectively shift data from one region to another in either directions (column 6, line 33 – column 7, line 7 and Figure 7). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Gould's system by running and displaying real-time data in a exchange environment and updating when new data is available from an exchange server and shifting old data from one region to another in either directions. One would be motivated to do so because updating real-time data to a graph when new data is available allows users to see up-to-date information and having a sliding lens allows users to view any portion of the data the user desires.

Regarding dependent claim 2, Gould discloses where the sound graph in Figure 8 shows a time axis being divided into different linear and continuous regions 51 46 and Figure 10 clearly shows a time axis being divided into different linear and continuous regions and data being displayed for the sound file (Figure 8), which reads on the claimed each linear scale is a linear time scale and the claimed data series comprises a time data series.

Regarding dependent claim 3, Gould discloses where the sound graph in Figure 8 shows a time axis being divided into different linear and continuous regions 51 46 and Figure 10 clearly shows a time axis being divided into different linear and continuous regions, which reads on the claimed scale resolution comprises a time scale resolution.

Regarding dependent claim 5, Gould discloses a computerized system 10 that is user customizable to display information of high level of detail scale resolution in one section and to display information of low level of detail scale resolution in other sections (column 2, lines 13 – 21 and Figures 8 – 10), which reads on the claimed plurality of axis regions comprises a first axis region that displays a portion of the data series using a high level of detail scale resolution, and wherein other axis regions of the plurality of axis regions use progressively lower levels of detailed scale resolutions.

Regarding dependent claim 6, Duquette discloses a trader workstation 714 that can load historical data and begin processing current real-time market data coming from the exchange server 710 (paragraph 69 and Figure. 7). The combination of Gould's and Duquette's system mention above reads on the claimed first axis region displays a portion of the data series corresponding to a more recent time period than a time period corresponding to the second axis region.

Regarding dependent claim 7, Gould discloses a computerized system 10 is user customizable to select portion of the data series by being able to expand and shrink sections of the plot (column 2, lines 13 – 21 and Figures 8 – 10), which reads on the claimed first axis region displays a user-selected portion of the data series.

Regarding dependent claim 8, Gould discloses a computerized system 10 is user customizable to create a plurality of axis regions by being able to expand and shrink sections of the plot (column 2, lines 13 – 21 and Figures 8 – 10), which reads on the claimed plurality of axis regions displayed in relation to the axis scale is user customizable.

Regarding dependent claim 9, Gould discloses computerized system 10 is user customizable to modify the scale resolution by being able to expand and shrink sections of the plot (column 2, lines 13 – 21 and Figures 8 – 10), which reads on the claimed scale resolutions corresponding to the plurality of axis regions are user customizable.

Regarding dependent claim 10, Duquette discloses a trader workstation 714 that is able to save market data previously received from the exchange server 710 and loads the historical data first and then begin processing of the current real-time market data coming from the exchange server 710 (paragraph 69), which reads on the claimed data series comprises a data series associated with a tradable object being traded at an electronic exchange, and wherein the data series is being dynamically updated based on updates received from an electronic exchange.

Regarding dependent claim 11, Duquette discloses a bar chart 300, where each bar 310 represents a range of trading prices over an interval, and additional markings 312, 314, may represent another parameter, such as opening and closing prices (paragraphs 9 and 104 and Figures 3 and 9), which reads on the claimed chart displays a plurality of data series.

Regarding dependent claim 12, Duquette discloses displaying range values 312, 314 on a bar graph 300 (paragraphs 9 and 104 and Figures 3 and 9), which reads on the claimed bar chart comprises a plurality of bars associated with a plurality of time periods, and wherein each bar shows at least a range of values corresponding to a parameter related to a tradable object during a time period associated with each bar.

Regarding dependent claim 13, Duquette discloses displaying range values 312, 314 on a bar graph 300 and in where the range values may represent opening and closing prices and that every bar 910 indicates the price range of each auction event (paragraphs 9 and 104 and Figures 3 and 9), which reads on the claimed each bar further displays an opening value and a closing value corresponding to the parameter related to the tradable object during the time period associated with each bar.

Regarding dependent claim 14, Duquette discloses displaying range values 312, 314 on a bar graph 300 and in where the range values may represent opening and closing prices and that every bar 910 indicates the price range of each auction event (paragraphs 9 and 104 and Figures 3 and 9), which reads on the claimed parameter related to the tradable object comprises a trade price corresponding to the tradable object.

Regarding dependent claim 15, Duquette discloses the label "VOLUME" in Figure 3 and the dot 912 on the auction bar indicates the volume weighted average price (paragraphs 9 and 104 and Figures 3 and 9), which read on the claimed parameter related to the tradable object comprises a traded volume.

Regarding dependent claim 16, Duquette discloses a trader workstation 714 that is able to save market data previously received from the exchange server 710 and loads the historical data

Art Unit: 2628

first and then begin processing of the current real-time market data coming from the exchange server 710 (paragraph 69), which reads on the claimed values displayed in relation to the bar chart are dynamically updated based on data updates being received from the electronic exchange.

Regarding independent claim 17, Gould discloses a computerized system 10, comprising a console 11 containing a CPU 12, memory 13, I/O circuitry 14 connected to a monitor 15 having a display screen 16, and control devices in the form of keyboard 17 and a mouse 18 (lines 19 – 23, column 1). Gould also discloses a computerized system provides the user with means to shrink less important or less significant portions of the information displayed, with the result of magnifying the portions that the user deems significant (lines 14 – 18, column 2) where the information displayed is in the form of video, sound, graphics or text while maintaining a general view of the information (lines 63 – 67, column 1) and where the sound graph in Figure 8 shows a time axis being divided into different linear and continuous regions 51 46 and Figure 10 clearly shows a time axis being divided into different linear and continuous regions, which reads on the claimed time axis divided into a plurality of time axis regions comprising at least a first time axis region and a second time axis region, wherein each of the first time axis region and the second time axis region uses a different linear time scale, wherein each of the first time axis region and the second time axis regions uses a different linear time scale, and wherein the plurality of time axis regions forms a continuous non-linear time scale on the time axis. Gould did not expressly disclose displaying data series that is tradable objects. Gould also did not expressly disclose new data and shifting old data from one region to another because of new data. Gould discloses data being displayed for the sound file (Figure 8) and that a user can play through a portion of a

Art Unit: 2628

recorded sound file and will play at normal speed through the marked segments 51, but will fast-forward at (for example) twice the normal speed through the unmarked segments 52 and in where the marked segments 51 being expanded in time and the unmarked segments 52 being condensed (column 5, lines 43 – 50 and Figure 8). Duquette discloses a trader workstation 714 that is able to save market data previously received from the exchange server 710 and loads the historical data first and then begin processing of the current real-time market data coming from the exchange server 710 (paragraph 69). Holzman discloses a lens that zooms in a portion of a graph and the lens being able to slide, effectively shift data from one region to another in either directions (column 6, line 33 – column 7, line 7). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Gould's system by running and displaying real-time data in a exchange environment and updating when new data is available from an exchange server and shifting old data from one region to another in either directions. One would be motivated to do so because updating real-time data to a graph when new data is available allows users to see up-to-date information and having a sliding lens allows users to view any portion of the data the user desires.

Regarding dependent claims 19 – 22, claims 19 – 22 are similar in scope as to claims 5 and 12 – 14, thus the rejections for claims 5 and 12 – 14 hereinabove is applicable to claims 19 – 22.

Regarding dependent claim 23, Duquette discloses the label "VOLUME" in Figure 3 and the dot 912 on the auction bar indicates the volume weighted average price (paragraphs 9 and 104 and Figures 3 and 9), which read on the claimed parameter comprises a traded quantity associated with the tradable object.

Art Unit: 2628

Regarding independent claims 25 and 26, claims 25 and 26 are similar in scope as to claim 17, thus the rejections for claim 17 hereinabove is applicable to claims 25 and 26.

Regarding dependent claims 28 – 35, claims 28 – 35 are similar in scope as to claims 5, 7 – 10, 12, 14, and 15, thus the rejections for claims 5, 7 – 10, 12, 14, and 15 hereinabove are applicable to claims 28 – 35.

Claims 4, 18, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gould (US 6,219,052) in view of Duquette (US 2005/0228735) and Holzman et al. (US 6,064,401) and Tufte (“The Visual Display of Quantitative Information”).

Regarding dependent claims 4, 18, and 27, Gould nor Duquette expressly disclose the plurality of axis regions use at least two of a year-based time frame, a quarter-based timeframe, a month-based timeframe, a week-based timeframe, a day-based timeframe, and a second-based timeframe. Tufte discloses a bar graph that has two time regions that shoes the current prices of oil and the predicted increase of oil. Tufte also discloses one of the time region being linear in a year-base timeframe and the other time region being linear in a quarter-base timeframe (page 61). Duquette discloses time series data being in intervals from tens of seconds, to minutes, hours, days, months or years (paragraph 9). It would have been obvious to one of ordinary skills in the art at the time of the invention to modify the combination of Gould’s and Duquette’s systems displaying tradable object at different time intervals of all possibilities and combinations in any order of at least two of a year-based time frame, a quarter-based timeframe, a month-based timeframe, a week-based timeframe, a day-based timeframe, and a second-based

Art Unit: 2628

timeframe. One would be motivated to do so because this gives users flexibility to broadly and specifically view data of interests within reasonable time scales.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gould (US 6,219,052) in view of Duquette (US 2005/0228735) and Rao (US 6,085,202).

Regarding dependent claim 24, Roa discloses a variable zoom level of having three-level of DOI and in where the largest focal cell represents the highest level of interests, intermediate-sized focal cells for the second level of interest, and the smallest context or non-focal, cells of the third level of interest and this can be applied to any axis or to both columns and rows (column 23, lines 25 – 40, column 24, lines 11 – 28 and Figures 7 and 9). It would have been obvious to one of ordinary skills in the art at the time of the invention to modify the combination of Gould's and Duquette's systems by having a second axis in relations to the time axis and in where the second axis has the same functionality of characteristics as the time axis. One would be motivated to do sob because this gives users the flexibility to accurately zoom and focus to a time and region of interests.

Conclusion

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2628

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey J. Chow whose telephone number is (571)272-8078. The examiner can normally be reached on Monday - Friday 10:00AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JJC


ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER